Primary and secondary storage configuration and topology

SnapManager Oracle

NetApp
January 29, 2021

This PDF was generated from https://docs.netapp.com/us-en/snapmanager-oracle/unix-administration/concept_primary_and_secondary_storage_configuration_and_topology.html on October 26, 2021. Always check docs.netapp.com for the latest.

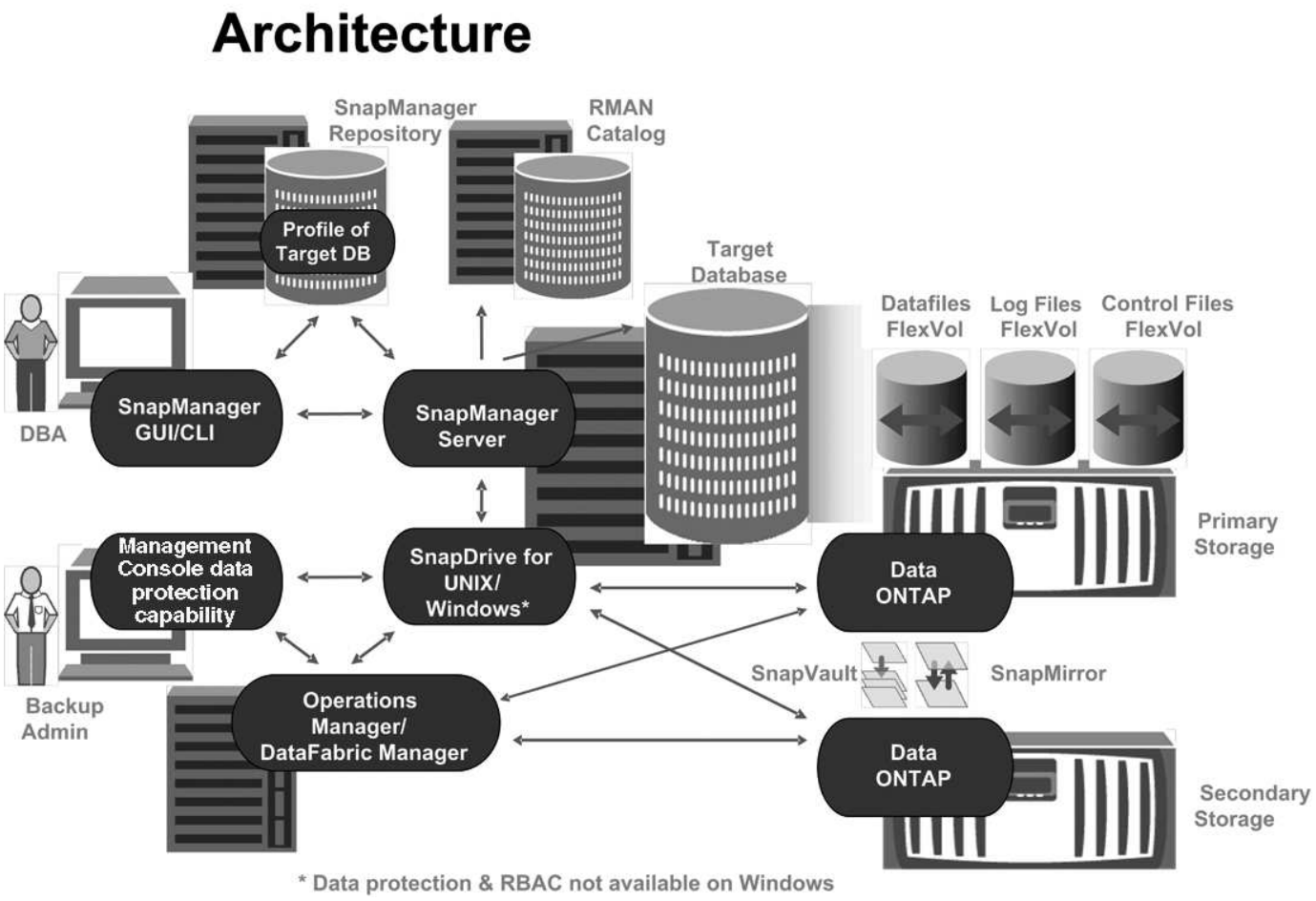
Table of Contents

Primary and secondary storage configuration and topology 1

Primary and secondary storage configuration and topology

In this example, the TechCo corporation runs its payroll database on a database server that is also a SnapManager for Oracle host and stores its payroll database data and configuration files on primary storage systems at company headquarters. The corporate requirement is to protect that database with daily and weekly backups to local storage as well as backups to storage systems at a secondary storage site fifty miles away.

The following illustration shows the SnapManager for Oracle and the NetApp Management Console data protection capability components required to support local and secondary backup protection.



To manage the payroll database and support its local and secondary backup protection as illustrated in the previous graphic, the following deployment is used.

- **SnapManager host**

  The SnapManager host, payroll.techco.com, is located at company headquarters and runs on a UNIX server, which also runs the database program that generates and maintains the payroll database.

  - **Connections**

    To support local backup and secondary backup protection, the SnapManager host has network connections to the following components:

        - SnapManager for Oracle client
        - SnapManager repository, which runs the database program, SnapDrive for UNIX, and SnapManager
        - Primary storage systems
        - Secondary storage systems
        - DataFabric Manager server
    - **Installed products**

      The SnapManager host is installed with the following products for this example:

        - SnapManager server
        - SnapDrive for UNIX
        - Host Utilities
- **TechCo primary storage systems**

  The payroll database, including associated data files, log files, and control files, reside on the primary storage systems. These are located at TechCo company headquarters along with the SnapManager host and the network connecting primary storage and the SnapManager host. The latest payroll database transactions and updates are written to the primary storage systems. Snapshot copies, which provide local backup protection of the payroll database, also reside on the primary storage systems.

    - **Connections**

      To support secondary backup protection, the primary storage systems have network connections to the following components:

        - SnapManager host running the database program, SnapDrive for UNIX, and SnapManager
        - Secondary storage systems
        - DataFabric Manager server
    - **Installed products**

      The following licenses must be enabled on these systems for this example:

        - Data ONTAP 7.3.1 or later
        - SnapVaultData ONTAP Primary
        - FlexVol (required for NFS)
        - SnapRestore
        - NFS protocol
- **TechCo secondary storage systems**

  The secondary storage systems, located at a network-connected secondary storage site fifty miles away, are used to store secondary backups of the payroll database.

    - **Connections**

      To support secondary backup protection, the secondary storage systems have network connections to the following components:

        - Primary storage systems
        - DataFabric Manager server
    - **Installed products**

      The following licenses must be enabled on the secondary storage systems for this example:

        - Data ONTAP
        - SnapVaultData ONTAP Secondary
        - SnapRestore
        - FlexVol (required for NFS)
        - NFS protocol
- **DataFabric Manager server**

  The DataFabric Manager server, techco_dfm, is located at company headquarters in a location accessible by the storage administrator. The DataFabric Manager server, among other functions, coordinates the backup tasks between primary and secondary storage.

    - **Connections**

      To support secondary backup protection, the DataFabric Manager server maintains network connections to the following components:

        - NetApp Management Console
        - Primary storage systems
        - Secondary storage systems
    - **Installed products**

      The DataFabric Manager server is licensed for the following server products for this example:

        - DataFabric Manager
- **SnapManager repository**

  The SnapManager repository, located on a dedicated server, stores data about operations performed by SnapManager, for example the time of backups, tablespaces and datafiles backed up, storage systems used, clones made, and Snapshot copies created. When a DBA attempts a full or partial restore, SnapManager queries the repository to identify backups that were created by SnapManager for Oracle for restoration.

    - **Connections**

      To support secondary backup protection, the secondary storage systems have network connections to the following components:

        - SnapManager host
        - SnapManager for Oracle client
- **NetApp Management Console**

  The NetApp Management Console is the graphical user interface console used by the storage administrator to configure schedules, policies, datasets, and resource pool assignments to enable backup

to secondary storage systems, which are accessible to the storage administrator.

  - **Connections**

    To support secondary backup protection, NetApp Management Console has network connections to the following components:

    - Primary storage systems
    - Secondary storage systems
    - DataFabric Manager server

- **SnapManager for Oracle client**

  The SnapManager for Oracle client is the graphical user interface and command line console used by the DBA for the payroll database in this example to configure and carry out local backup and backup to secondary storage.

  - **Connections**

    To support local backup and secondary backup protection, SnapManager for Oracle client has network connections to the following components:

    - SnapManager host
    - SnapManager repository, running the database program, SnapDrive for UNIX, and SnapManager
    - Database host (if separate from the host running SnapManager)
    - DataFabric Manager server

  - **Installed products**

    To support local backup and secondary backup protection, the SnapManager for Oracle client software must be installed on this component.

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at http://www.netapp.com/TM are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.